

WHAT IS CLAIMED IS:

1. An optical disc having at least two layers on which information can be recorded by recording light, one layer being a first recording layer, another layer being a second recording layer disposed behind the first recording layer as viewed by the recording light, wherein:

the first recording layer and the second recording layer have respective power adjustment areas that are used to adjust the power of the recording light to an optimal recording power before recording information on each recording layer; and

the first recording layer has,

as a prewrite area in a position corresponding to the power adjustment area in the second layer, an area equal to the power adjustment area in the second recording layer plus a restricted area adjacent the power adjustment area in the second recording layer, no information being recorded in the restricted area of the second recording layer until recording in the corresponding area in the first recording layer is completed.

2. The optical disc of claim 1, wherein the restricted area has a size A_w measured in a radial direction of the optical disc satisfying the following condition:

$$A_w \geq e + D/2$$

where e is a maximum tolerable misalignment when the first recording layer and the second recording layer are laminated together, and D is a diameter of the recording light that records information on the first recording layer and the second recording layer.

3. The optical disc of claim 1, further comprising a disc management area in which disc-related management information is recorded, the disc-related management information including address information designating a final write address of the prewrite area.

4. The optical disc of claim 1, further comprising a disc management area in which disc-related management information is recorded, the disc-related management information including discrimination information indicating whether prewriting has been performed in the prewrite area.

5. The optical disc of claim 1, wherein each of the first recording layer and the second recording layer further comprises a recording management area in which recording-related management information is recorded, the disc-related management information including address information designating a final write address of the prewrite area.

6. The optical disc of claim 1, wherein each of the first recording layer and the second recording layer further comprises a recording management area in which recording-related management information is recorded, the recording-related management information including discrimination information indicating whether prewriting has been performed in the prewrite area.

7. An optical disc device for recording and reproducing information on the optical disc of claim 1, comprising:

means for obtaining discrimination information indicating whether prewriting has been performed in the prewrite area;

means for deciding, from the discrimination information thus obtained, whether prewriting has already been performed

in the prewrite area, and recording in the prewrite area if prewriting has not already been performed in the prewrite area;

means for adjusting the power to said optimal recording power on the power adjustment area in the second recording layer; and

means for recording information at the adjusted optimal recording power.

8. The optical disc device of claim 7, further comprising means for updating the discrimination information when prewriting has been performed on the prewrite area.

9. An optical disc device for recording and reproducing information on the optical disc of claim 1, comprising:

means for obtaining address information indicating a final recorded end of the prewrite area;

means for deciding, from the address information thus obtained, whether prewriting has already been performed in the prewrite area, and recording in the prewrite area if prewriting has not already been performed in the prewrite area;

means for adjusting the power to said optimal recording power on the power adjustment area in the second recording layer; and

means for recording information at the adjusted optimal recording power.

10. The optical disc device of claim 9, further comprising means for updating the final recorded end address information when prewriting has been performed on the prewrite area.

11. An optical disc device for recording and reproducing

information on the optical disc of claim 1, comprising:

means for obtaining address information indicating a final recorded end of the prewrite area;

means for performing additional recording in the prewrite area, based on the address information thus obtained, to give the prewrite area a length longer than a length defined by a sum of lengths of the power adjustment area and the restricted area, the restricted area being disposed on both sides of the power adjustment area;

means for adjusting the power to said optimal recording power on the power adjustment area in the second recording layer; and

means for recording information at the adjusted optimal recording power.

12. The optical disc device of claim 11, further comprising means for updating the final recorded end address information when prewriting has been performed on the prewrite area.

13. A method of recording information on the optical disc of claim 1, comprising:

adjusting the power of the recording light by using the power adjustment areas on the optical disc; and

recording information by using recording light having the adjusted power.

14. An optical disc driving method for recording or reproducing information on the optical disc of claim 1, comprising:

obtaining address information indicating a final recorded end of the prewrite area;

deciding, from the address information thus obtained, whether prewriting has already been performed in the

prewrite area, and recording in the prewrite area if prewriting has not already been performed in the prewrite area;

adjusting the power to said optimal recording power on the power adjustment area in the second recording layer; and recording information at the adjusted optimal recording power.

15. The optical disc driving method of claim 14, further comprising updating the discrimination information when prewriting has been performed on the prewrite area.

16. An optical disc driving method for recording or reproducing information on the optical disc of claim 1, comprising:

obtaining address information indicating a final recorded end of the prewrite area;

deciding, from the address information thus obtained, whether prewriting has already been performed in the prewrite area, and recording in the prewrite area if prewriting has not already been performed in the prewrite area;

adjusting the power to said optimal recording power on the power adjustment area in the second recording layer; and

recording information at the adjusted optimal recording power.

17. The optical disc driving method of claim 16, further comprising updating the final recorded end address information when prewriting has been performed on the prewrite area.

18. An optical disc driving method for recording or reproducing information on the optical disc of claim 1,

comprising:

obtaining address information indicating a final recorded end of the prewrite area;

performing additional recording in the prewrite area, based on the address information thus obtained, to give the prewrite area a length longer than a length defined by a sum of lengths of the power adjustment area and the restricted area, the restricted area being disposed on both sides of the power adjustment area;

adjusting the power to said optimal recording power on the power adjustment area in the second recording layer; and

recording information at the adjusted optimal recording power.

19. The optical disc driving method of claim 18, further comprising updating the final recorded end address information when prewriting has been performed on the prewrite area.